AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (previously presented) A method of partitioning resource spaces and assigning physical channels and power in an OFDMA (orthogonal frequency division multiple access)-based cellular system which comprises a plurality of base stations and a plurality of cells associated with the base stations, said method comprising:

(a) partitioning a resource within each slot of the cellular system into resource spaces, in common in adjacent cells of the cellular system;

(b) further partitioning the partitioned resource spaces into resource sets according to respective sizes of physical channels in the adjacent cells, wherein the resource sets within one resource space of one of the adjacent cells are arranged to be collided as uniformly as possible with all the resource sets within the same resource space of another adjacent cell; and

(c) assigning the physical channels classified based on characteristics to the partitioned resource sets within the respective resource spaces.

2.   (previously presented) A method of partitioning resource spaces and assigning physical channels and power in an OFDMA (orthogonal frequency division multiple access)-based cellular system which comprises a plurality of base stations and a plurality of cells associated with the base stations, said method comprising:

(a) partitioning a resource within each slot of the cellular system into resource spaces, in common in adjacent cells of the cellular system;

(b) further partitioning the partitioned resource spaces into resource subspaces, in common in the adjacent cells;

(c) further partitioning the partitioned resource spaces and the partitioned resource subspaces into resource sets according to respective sizes of physical channels in the adjacent cells, wherein the resource sets within one resource space or subspace of one of the adjacent cells are arranged to be collided as uniformly as possible with all the resource sets within the same resource space or subspace of another adjacent cell; and

(d) assigning the physical channels classified based on characteristics to the partitioned resource sets within the respective resource spaces and the resource subspaces.

3.   (previously presented) The method of claim 1, wherein the physical channels comprise one or more of common channels, dedicated control channels, shared control channels, dedicated traffic channels, and shared traffic channels and are allocated to at least one of the resource spaces of each cell.

4.   (previously presented) The method of claim 2, wherein

the physical channels comprise one or more of common channels, dedicated control channels, and shared control channels; and

said (b) comprises partitioning each resource space, through which the common channels, the dedicated control channels, and the shared control channels of each cell are transmitted, into the respective resource subspaces so that the channels with similar physical channel characteristics may be transmitted in a single one among the subspaces.

5-6.   (canceled)

7.   (previously presented) The method of claim 1, wherein subcarriers which constitute the resource spaces are configured by at least one subcarrier set which covers at least one wide frequency

frequency band and has a predetermined spacing.

8.   **(currently amended)** The method of claim 2, wherein subcarriers, which constitute the resource spaces and the resource subspaces [[are]], are configured by at least one subcarrier set which covers at least one wide frequency band and has a predetermined spacing.

9.   (previously presented) The method of claim 1, further comprising:

allocating a transmit power of the resource space to a physical channel which, among the physical channels assigned to the resource set, uses a fixed transmit power; and

allocating a power within the maximum transmit power of the resource space to a physical channel which, among the physical channels assigned to the resource set, uses a variable transmit power.

10.   (previously presented) The method of claim 2, further comprising:

allocating a transmit power of the resource subspace to a physical channel which, among the physical channels assigned to the resource set, uses a fixed transmit power; and

allocating a power within the maximum transmit power of the resource subspace to a physical channel which , among the physical channels assigned to the resource set, uses a variable transmit power.

11.   (original)   The method of claim 9, wherein the transmit power is allocated by considering cell sizes, interference of adjacent cells, and a required SNR (signal to noise ratio).

12.   (original)   The method of claim 9, wherein the maximum transmit power is allocated by considering cell sizes, interference of adjacent cells, and a required SNR (signal to noise ratio).

13.   **(currently amended)** ~~A method of partitioning resource spaces and assigning physical channels and power in an OFDMA (orthogonal frequency division multiple access) based cellular system which comprises a plurality of base stations and a plurality of cells associated with the base stations, said method comprising:~~

~~(a) partitioning a resource within each slot of the cellular system into resource spaces, in common in adjacent cells of the cellular system;~~

~~(b) further partitioning the partitioned resource spaces into resource subspaces, in common in the adjacent cells;~~

~~(c) further partitioning the partitioned resource spaces and the partitioned resource subspaces into resource sets according to respective sizes of physical channels in the adjacent cells; and~~

~~(d) assigning the physical channels classified based on characteristics to the partitioned resource sets within the respective resource spaces and the resource subspaces;~~

~~the method further comprising:~~

~~allocating a transmit power of the resource subspace to a physical channel which, among the physical channels assigned to the resource set, uses a fixed transmit power;~~

~~allocating a power within the maximum transmit power of the resource subspace to a physical channel which, among the physical channels assigned to the resource set, uses a variable transmit power;~~

The method of claim 10, further comprising:

partitioning the resource space, through which a traffic channel is transmitted, into resource subspaces by the number of adjacent cells according to a cell arrangement; and

for each cell, allocating to a resource subspace a transmit power higher than that of the other resource subspace, wherein the resource subspace with the higher transmit power varies from one cell to another cell among the adjacent cells.

14.   (previously presented) The method of claim 13, further comprising:

allowing a user, who needs a high transmit power in each cell, to use a traffic channel of the resource subspace with the higher transmit power.

15.   (previously presented) The method of claim 10, further comprising:

partitioning the resource space, through which a traffic channel is transmitted, into resource subspaces by the number of adjacent cells according to a cell arrangement; and

for each cell, allocating to a resource subspace a transmit power higher than that of the other resource subspace, wherein the resource subspace with the higher transmit power varies from one cell to another cell among the adjacent cells.

16.   (previously presented) The method of claim 15, further comprising:

allowing a user, who needs a high transmit power in each cell, to use a traffic channel of the resource subspace with the higher transmit power.